

REMARKS

Entry of the foregoing amendments is respectfully requested.

Summary of Amendments

Upon entry of the foregoing amendments claims 30-76 are cancelled and claims 77-123 are added, whereby claims 77-123 will be pending, claims 77, 98, 109 and 121 being independent claims.

Support for the new claims can be found throughout the present specification (see, e.g., pages 18, 19, 30 and the Examples) and the cancelled claims.

It is pointed out that the cancellation of claims 30-76 is without prejudice or disclaimer, and Applicants expressly reserve the right to prosecute the cancelled claims in one or more continuation and/or divisional applications.

Summary of Office Action

As an initial matter, Applicants note with appreciation that the Examiner has indicated consideration of the Information Disclosure Statement filed December 4, 2006 by returning a signed and initialed copy of the Form PTO-1449 submitted therein.

Applicants further note with appreciation that the Examiner has acknowledged the claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f) and the receipt of a certified copy of the priority document from the International Bureau.

Claims 44-52, 56, 60, 62 and 68-76 are withdrawn from consideration.

Claims 30-43, 53-55, 57-59, 61 and 63-67 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by or, in the alternative under 35 U.S.C. § 103(a) as allegedly being obvious over Kodas et al., US 2003/0175411 (hereafter “KODAS”).

Claims 30, 31, 35-38, 42, 43, 53-55, 57-59, 61 and 63-66 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by or, in the alternative under 35 U.S.C. § 103(a) as allegedly being obvious over Farnworth et al., U.S. Patent No. 7,153,754 (hereafter “FARNWORTH”).

Claims 32-34, 39-41 and 67 are rejected under 35 U.S.C. § 103(a) as allegedly being obvious over FARNWORTH and further in view of KODAS.

Response to Office Action

Reconsideration and withdrawal of the rejections of record are respectfully requested in view of the foregoing amendments and the following remarks.

Response to Rejection of Claims over KODAS

Claims 30-43, 53-55, 57-59, 61 and 63-67 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by or, in the alternative under 35 U.S.C. § 103(a) as allegedly being obvious over KODAS. The rejection essentially alleges that KODAS discloses all of the elements of the rejected claims either expressly or inherently.

Applicants note that the rejected claims are cancelled, wherefore this rejection is moot.

Regarding the claims submitted herewith, it is noted that the present independent claims recite, *inter alia*, the following elements:

- (A) the matrix of the thermal insulation material has a softening point above 1200°C (claim 77),
- (B) the matrix of the thermal insulation material comprises mullite and/or zirconium silicate (claim 98),
- (C) the thermal insulation material is present as a molding (claim 109), and
- (D) the thermal insulation material is present as a part of a refrigerator, an oven, laboratory equipment, an article used in metallurgy or glass production, or a combination of insulation and fire protection, or is present as an encapsulant of a heat-sensitive electronic device or a cable (claim 121).

Regarding element (A), KODAS does not appear to disclose any material which can be considered to correspond to the matrix of the thermal insulation material of the present invention and has a softening point above 1200°C.

Further, KODAS is directed to precursor compositions for the deposition of electronic features such as resistors and dielectric components and methods for the deposition of the precursor compositions. The precursor compositions can be deposited using a direct-write tool and also have a low conversion temperature, enabling the formation of electronic features on a wide variety of substrates, including low temperature substrates. See, e.g., abstract of KODAS.

Since electronic features such as resistors and dielectric components are not usually required to be able to withstand temperatures above 1200°C, there is no apparent reason for one of ordinary skill in the art to provide a precursor composition according to KODAS which would result in electronic features which have a softening point above 1200°C (if possible at all).

In view of the foregoing it is submitted that KODAS neither anticipates nor renders obvious the subject matter of claim 77 and the claims dependent therefrom.

Regarding element (B), it is not seen that KODAS teaches or suggests a matrix of the type recited in claim 98 which comprises mullite and/or zirconium silicate. For this reason alone, KODAS is unable to render obvious the subject matter of claim 98 and the claims dependent therefrom.

Regarding element (C), the electronic features such as resistors and dielectric components taught by KODAS (which can be made by using a direct-write tool) clearly do not qualify as moldings and neither does KODAS contain any statement that would suggest that the compositions disclosed therein may be used for the production of moldings. For at least these reasons, KODAS neither anticipates nor renders obvious the subject matter of claim 109 and the claims dependent therefrom.

Regarding element (D), KODAS is concerned with the production of electronic features such as resistors and dielectric components. The electronic components of KODAS clearly have nothing in common with articles such as refrigerators, ovens, laboratory equipment, articles used in metallurgy or glass production, a combination of insulation and fire protection, or encapsulants for heat-sensitive electronic devices or cables, wherefore there is no apparent reason for one of ordinary skill in the art to provide these articles by using a composition according to KODAS. For this reason alone, KODAS neither anticipates nor renders obvious the subject matter of claim 121 and the claims dependent therefrom.

Applicants submit that for at least all of the foregoing reasons, withdrawal of the rejection under 35 U.S.C. § 102(e) or 35 U.S.C. § 103(a) over KODAS is warranted, which action is respectfully requested.

Response to Rejection of Claims over FARNWORTH

Claims 30, 31, 35-38, 42, 43, 53-55, 57-59, 61 and 63-66 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by or, in the alternative under 35 U.S.C. § 103(a) as allegedly being obvious over FARNWORTH. The rejection essentially alleges that FARNWORTH discloses all of the elements of the rejected claims either expressly or inherently.

Applicants note that the rejected claims are cancelled, wherefore this rejection is moot.

Regarding the claims submitted herewith, it is again noted that the present independent claims recite, *inter alia*, the following elements (A) to (D):

- (A) the matrix of the thermal insulation material has a softening point above 1200°C (claim 77),
- (B) the matrix of the thermal insulation material comprises at least one of mullite and zirconium silicate (claim 98),
- (C) the thermal insulation material is present as a molding (claim 109), and
- (D) the thermal insulation material is present as a part of a refrigerator, an oven, laboratory equipment, an article used in metallurgy or glass production, or a combination of insulation and fire protection, or is present as an encapsulant of a heat-sensitive electronic device or a cable (claim 121).

Regarding element (A), FARNWORTH does not appear to disclose any material which can be considered to correspond to the matrix of the thermal insulation material of the present invention and has a softening point above 1200°C (if possible at all).

Further, FARNWORTH is directed to methods for forming porous insulative materials for use in forming dielectric structures of semiconductor devices. In their porous state the insulative materials have a reduced dielectric constant and, thus, increased electrical insulation properties. See,

e.g., abstract of FARNWORTH.

Since semiconductor devices are not usually required to be able to withstand temperatures above 1200°C, there is no apparent reason for one of ordinary skill in the art to provide materials according to FARNWORTH which would result in the production of semiconductor devices or parts thereof which have a softening point above 1200°C.

In view of the foregoing, it is submitted that FARNWORTH neither anticipates nor renders obvious the subject matter of claim 77 and the claims dependent therefrom.

Regarding element (B), it is not seen that FARNWORTH teaches or suggests a matrix (dielectric material) of the type recited in claim 98 which comprises mullite and/or zirconium silicate. For this reason alone, FARNWORTH is unable to render obvious the subject matter of claim 98 and the claims dependent therefrom.

Regarding element (C), the dielectric layers of the semiconductor devices of FARNWORTH clearly do not qualify as moldings and neither does this document contain any statement that would suggest that the compositions disclosed therein may be used for the production of (stand-alone) moldings. For at least these reasons, FARNWORTH neither anticipates nor renders obvious the subject matter of claim 109 and the claims dependent therefrom.

Regarding element (D), FARNWORTH is concerned with the production of (dielectric layers of) semiconductor devices. Semiconductor devices clearly have nothing in common with articles such as refrigerators, ovens, laboratory equipment, articles used in metallurgy or glass production, a combination of insulation and fire protection, and encapsulants for heat-sensitive electronic devices or cables. Accordingly, there is no reason for one of ordinary skill to provide these

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articles with a dielectric material according to FARNWORTH. For this reason alone, FARNWORTH neither anticipates nor renders obvious the subject matter of claim 121 and the claims dependent therefrom.

For at least all of the foregoing reasons withdrawal of the rejection under 35 U.S.C. § 102(e) or 35 U.S.C. § 103(a) over FARNWORTH is warranted and respectfully requested.

Response to Rejection of Claims over FARNWORTH in view of KODAS

Claims 32-34, 39-41 and 67 are rejected under 35 U.S.C. § 103(a) as allegedly being obvious over FARNWORTH and further in view of KODAS. Applicants note that these claims are cancelled, wherefore this rejection is moot as well. At any rate, as set forth above neither FARNWORTH nor KODAS is able to anticipate or render obvious any of the features (A) to (D) recited in the present independent claims, wherefore any dependent claims are patentable over a combination of FARNWORTH and KODAS for this reason alone.

CONCLUSION

In view of the foregoing, it is believed that all of the claims in this application are in condition for allowance, which action is respectfully requested. If any issues yet remain which can be resolved by a telephone conference, the Examiner is respectfully invited to contact the undersigned at the telephone number below.

Respectfully submitted,
Klaus ENDRES et al.

A handwritten signature in dark ink, appearing to read "Neil F. Greenblum", written over a horizontal dashed line.

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